



Pit & Go Hell

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Photo by SSgt Matthew Hannen

"Tail 419, you are cleared onto hot pit number two," called the hot pit supervisor.

"Tail 419," I responded, acknowledging the clearance.

It was another beautiful winter day in the Mighty Viper as I skillfully taxied into hot pit number two. I had just completed my first sortie of a two sortie *pit and go*. Bringing the jet to a stop, I wish my performance in the air had been just as impressive as my taxi to a full stop. Eating a Snickers bar, drinking a Coke, and watching the fuel gauge slowly climb towards full, I was suddenly back in flight, replaying my last sortie in my mind.

"Rogue 3, 30 seconds," my flight lead called for time to bomb release.

Then I thought: *O.K. center up steering with the flight path*

marker on the bomb fall line. I recalled that my GBU-12s need to have simultaneous impacts with my flight lead's bombs. Look in the Multi-Function Display (MFD) for the time until ballistic release ... 1:14 ... 1:14 ... that doesn't make sense?

I cross-checked my formation ... *I'm out of position, aft of line abreast. Light the burner, descend ... how far down do I need to go to make up the time ... let's see, 45 seconds behind, 2 seconds per 1,000 feet ... I need to descend over 20,000 feet ... this doesn't make any sense.*

"Rogue 3, 15 seconds," called my flight lead.

The mission called for a four-ship conducting simultaneous bombing runs. *Look in the MFD ... 55 seconds to release. Why am I so far behind? Am I on the correct side of the Design-*

nated Mean Point of Impact (DMPi)? Did I confuse the attack sequence again? I quickly ran the prebrief over in my mind.

The mission had involved a lot of swapping of targets and attack profiles. On the second attack, we swapped DMPis between elements with Rogue 1 and 2 hitting Rogue 3 and 4's DMPi. On the third, Rogue 3 and 4 then hit Rogue 1 and 2's DMPi with a right check for the laze leg instead of left. When I looked at the target photos, for the third attack, I also realized we'd be hitting the next target set as depicted with Joint Direct Attack Munitions (JDAM's).

"Rogue 3, 3...2...1...pickle," my flight lead called.

Still 30 seconds till release, what did I do wrong; there is no way to make this attack have simultaneous impacts.

"Rogue 4, is no drop," I called when I did not drop my bomb.

O.K. lead should be checking left for the lazy leg or was this one a right check? Make sure I am deconflicted from lead! After my accelerating descent he should be high and a little aft ... where is he ... I should have cross-checked his position more ...

"Rogue 4 is blind, knock-it-off" I called because now I lost my flight lead and my situational awareness.

That mission was confusing, I did not get my bomb off, I lost sight of lead, and had no situational awareness!

Pit & go missions involve flying two different missions wrapped around a hot pit fueling operation. You brief for the two missions before the first flight and do not debrief again until all missions are completed. Anything that goes wrong in the first mission must wait until the second mission is over to be fully debriefed. However, despite the confusion that can sometimes occur, pit & go operations can be an effective way to optimize

available aircraft. You can maximize sortie generation with a limited number of bodies, but if you do a pit & go, it needs to be done smartly because there is risk involved, especially with young wingmen.

Operational Risk Management (ORM) risk mitigating methodology we use every day can also be used to maximize training while minimizing the risks of pit & go operations. When conducting these type of operations, we as fighter pilots should look closely at six primary areas:

- What ranges are scheduled?
- What is the pilot experience and proficiency of the flight?
- What type of attacks are planned?
- What type of weapons will be used?
- Nutrition/hydration before and between the sorties
- Physiological limitations during the second sortie

ORM starts long before we show up for mission planning. Scheduling the same range for both sorties allows the flight lead to plan for a single mission using a single set of target photos and attack plans. An experienced flight lead will more successfully digest the information for numerous attacks with different weapons than a young wingman. For the new pilot this stack of information can be confusing in-flight, detract from training, and increase risks during a seemingly benign peacetime sortie.

With this in mind, planning an attack against a single set of targets with a single weapon allows the flight to concentrate on the execution of the primary attack. Flight leads should also brief contingency attacks without overwhelming flight members who have relatively low levels of experience or proficiency.

It's also important to consider what pilots eat and drink before and between sorties, especially if the sortie consists of high-G loads or demanding tasks. The fabled fighter pilot meal of a Coke and a candy bar just doesn't cut it.

Medical data shows that an energy spike occurs 30 to 60 minutes after eating sugar. Following the spike, the energy level rapidly decreases and reaches a low point barely 2 hours after eating. This makes the energy level lower than the level prior to eating any sugar. A Coke and candy bar on the way to the hot pits may give you increased energy and awareness just prior to takeoff, but on the second sortie there will be an exaggerated energy "low" toward the end of the sortie and during Return to Base.

More important than nutrition is hydration, especially when flying back-to-back Basic Fighter Maneuver (BFM) sorties. Dehydration drastically reduces G-tolerance and must be combated before each sortie. Hydration starts hours before the first sortie and continues during the pit & go sequence. Drinking a quart of water at step time does little more than require an extra piddle-pack prior to takeoff. If scheduled for pit & go sorties, start getting well hydrated the night before. A hydration "top-off"

prior to briefing the next day is then an easy task.

Let's not consider the second set of sorties as just a repeat of the first with the same sequence of high-G events.

A perch BFM sortie typically consists of 9,000-foot sets followed by 6,000-foot sets and ends up with 3,000-foot sets once the gas gets low. However, a smarter sequence from a G-tolerance standpoint is to intersperse 3,000-foot sets between the 9,000-foot and 6,000-foot sets. Plan the sortie to accomplish training and at the same time allow the body to recover. Planning to pull 9-Gs until you don't have enough gas left for a 6,000-foot set certainly makes you respect the mighty General Electric motor, but it also increases the risk of G-Induced Loss of Consciousness.

High aspect attacks should only be flown on the first sortie when the body is most able to withstand sustained heavy Gs. The decision to fly the last high aspect set, when the fuel state is approaching joker and the jet

can accelerate at high speeds must be based on the G-tolerance the pilots are experiencing that day. If your G-tolerance is low or you are simply worn-out, then its time to practice those 3,000-foot sets.

Plan the sequence of events so that the highest Gs are experienced when the body is most able to handle them. There is nothing wrong with flying high aspect BFM on the first sortie and a few perch BFM sets on the second sortie followed by tactical intercepts.

All in all, it's important to consider all the ORM aspects of conducting pit & go operations. The risks associated with a single sortie can be multiplies when it comes to consecutive flight operations. Many times the risks of pit & go operations may seem somewhat hidden — but they are very real. As the layers of decision-making are peeled back, you can identify and mitigate the increased risks associated with pit & go operations to allow both missions to be flown safely and effectively. ▶

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